Course Description
The objectives of this course are to
- describe important fixed income securities and markets, and
- develop tools for valuing fixed income securities and managing interest rate risk.
The course covers traditional bonds and term structure concepts as well as fixed income derivatives and interest rate modeling.

Schedule of Lectures:
1) Jan. 19 Course overview and survey of major fixed income markets
2) Jan. 21 Zeroes and coupon bonds
3) Jan. 26 Yield to maturity
4) Jan. 28 Forward rates
5) Feb. 2 The repo market
6) Feb. 4 Duration -- Problem set 1 due
7) Feb. 9 Convexity
8) Feb. 11 Immunization
9) Feb. 16 Floating rate notes and inverse floaters
10) Feb. 18 Swaps
11) Feb. 23 Characteristics of interest rates
12) Feb. 25 No arbitrage pricing -- Problem set 2 due
13) Mar. 2 Risk neutral probabilities
14) Mar. 4 Dynamic trading strategies
15) Mar. 9 An interest rate model
    Mar. 11 Midterm
16) Mar. 23 Model calibration
17) Mar. 25 Options
18) Mar. 30 American options
    Apr. 1 Callable Bonds -- Problem set 3 due
19) Apr. 6 More on callable bonds
20) Apr. 8 Swaptions
21) Apr. 13 The mortgage market
22) Apr. 15 Mortgage pools, passthroughs, IOs, and POs
23) Apr. 20 CMOs
24) Apr. 22 Caps
    Apr. 27 Floors and collars -- Problem set 4 due
25) Apr. 29 Futures
The study of fixed income securities is extremely quantitative by nature and the material in this course is very analytical. Not only should students have a background in finance, such as the core course, *Foundations in Finance*, but students should be extremely comfortable with mathematics as well. The course will also rely on statistical concepts such as probability distributions, mean, and variance. Please keep this in mind in deciding whether to take the course.

**Course Materials**

**Required**
- Lecture notes and problem sets

**Recommended**

**Selected readings**
- These materials are available at the book store and the reserve desk at the library.

**Course Requirements**

Grades will be based on the following.
- Problem Sets (5%)
- Midterm (40%)
- Final (55%)

**Problem Sets**

Because the material is analytical and new concepts build on old ones, it will be essential to do the problem sets in order to follow the lectures and succeed on the exams. To facilitate learning, I encourage students to work together on these problem sets. Groups of students working together should submit just one assignment. All students in the same group will get the same grade. I will not accept late assignments.

**Exams**

Please bring a financial calculator, one 8.5x11 inch page of notes (both sides) for the midterm, and two 8.5x11 inch pages of notes for the final.

You must take your exam with the section in which you are registered. Otherwise, with the following two exceptions, your grade for the exam will be zero.

1) In case of a legitimate, foreseeable conflict, in order to take the exam at a different time, you must make a request in writing or by email at least one week prior to the exam, and obtain my written or email permission prior to the exam.

2) In case of an emergency, you must provide formal, written verification, such as a letter from a doctor or employer.

Please note your final exam time below and make sure you have no scheduling conflict:
- Section 32 (TTh 5:30 p) Tuesday, May 4, 5:25-7:25 p, MEC 365
- Section 33 (TTh 7:00 p) Thursday, May 6, 7:35-9:35 p, MEC 365